



DOCKET NO. 3226.1021-001

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Declaration for Patent Application

[ ] Supplemental (37 C.F.R. §1.67)

As a named inventor, I hereby declare that:

My residence, mailing address and citizenship are as stated next to my name;

I believe I am the original, first and sole inventor (if only one name is listed) or an original, first and joint inventor (if plural names are listed in the signatory page(s) commencing at page 2 hereof) of the subject matter which is claimed and for which a patent is sought on the invention entitled

NOVEL RECEIVER ARCHITECTURE FOR PILOT BASED OFDM SYSTEMS

the specification of which (check one)

[ ] is attached hereto.

[x] was filed on November 14, 2003 as United States Application Number 10/713,562.

[ ] was filed on [PCT Filing Date] as PCT International Application No. [PCT Appl'n No.].

[ ] and was amended on [ ] (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 C.F.R. §1.56, including for continuation-in-part applications, material information which became available between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

I hereby claim foreign priority benefits under 35 U.S.C. 119 or 365 of any foreign application(s) for patent or inventor's certificate, or of any PCT international application which designated at least one country other than the United States of America, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or of any PCT international application having a filing date before that of the application on which priority is claimed:

<u>Prior Foreign Application(s)</u>			Priority Not Claimed	Certified Copy Filed?	
				YES	NO
<u>(Number)</u>	<u>(Country)</u>	<u>(Day/Month/Year filed)</u>	[ ]	[ ]	[ ]
<u>(Number)</u>	<u>(Country)</u>	<u>(Day/Month/Year filed)</u>	[ ]	[ ]	[ ]
<u>(Number)</u>	<u>(Country)</u>	<u>(Day/Month/Year filed)</u>	[ ]	[ ]	[ ]

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

-----  
Full name of sole

or first inventor Kanu Chadha

Inventor's Signature *Kanu Chadha* Date 3-4-04

Residence 10502 Fountain Lake Dr., Apt. 1723  
Stafford, Texas 77477

Citizenship India

Mailing Address same as above

-----  
Full name of second joint

inventor, if any Manish Bhardwaj

Inventor's Signature *Manish Bhardwaj* Date 3/11/2004

Residence ~~15 Iris Court, Suite M~~ 48 CONCORD AVE #2  
~~Acton, Massachusetts 01720~~ CAMBRIDGE MA 02138.

Citizenship India

Mailing Address same as above



HAMILTON, BROOK, SMITH & REYNOLDS, P.C.

**POWER OF ATTORNEY OR  
AUTHORIZATION OF AGENT AND  
CORRESPONDENCE ADDRESS**

Application Number	10/713,562
Filing Date	November 14, 2003
First Named Inventor	Kanu Chadha
Confirmation Number	
Group Art Unit	
Examiner Name	
Attorney Docket Number	3226.1021-001

Title NOVEL RECEIVER ARCHITECTURE FOR PILOT BASED OFDM SYSTEMS

I/We hereby appoint

☒ the attorneys/agents associated with **Customer No. 021005**

☐ Practitioner(s) named below:

as my/our attorneys/agents to prosecute the application identified above, including any continuation or divisional applications thereof, and to transact all business in the United States Patent and Trademark Office connected therewith.

The correspondence address for the above-identified application is:

☒ Customer Number 021005

Hamilton, Brook, Smith & Reynolds, P.C.

530 Virginia Road

P.O. Box 9133

Concord, Massachusetts 01742-9133

☐ Other

Please direct all telephone calls and facsimiles to:

Name James M. Smith, Esq. Tel. No. 978-341-0036 Fax No. 978-341-0136

I am the:

☐ Applicant/Inventor.

☒ Authorized representative of the Assignee, Engim, Inc., of the entire interest. See 37 C.F.R. § 3.71. A Statement under 37 C.F.R. § 3.73(b) is enclosed.

☐ Authorized representative of the Assignee, [ ], together with [ ], of the entire interest. A Statement under 37 C.F.R. § 3.73(b) is enclosed.

**SIGNATURE of Applicant or Assignee of Record**

Name & Title

ALEX BUGEJA CTO

Signature

Date

3/19/2004

STATEMENT UNDER 37 C.F.R. § 3.73(b)

Inventor(s): Kanu Chadha and Manish Bhardwaj

Application No./Patent No.: 10/713,562 Filed/Issue Date: November 14, 2003

For: NOVEL RECEIVER ARCHITECTURE FOR PILOT BASED OFDM SYSTEMS

Engim, Inc., a corporation  
(Name of Assignee) (Type of Assignee, e.g., corporation, partnership, university, government agency, etc.)

states that it is

- A. ☒ the assignee of the entire right, title and interest in the patent application identified above; or
- B. ☐ an assignee together with ☐ of the entire right, title and interest in the patent application identified above.

The right, title and interest of the above-named assignee in the patent application identified above is established by virtue of:

- A. ☒ An assignment from the inventor(s) of the patent application identified above. The assignment was recorded in the Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.

OR

- B. ☐ A chain of title from the inventor(s) of the patent application identified above, to the current assignee as shown below:

1. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
2. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.
3. From: \_\_\_\_\_ To: \_\_\_\_\_  
The document was recorded in the United States Patent and Trademark Office at Reel \_\_\_\_\_, Frame \_\_\_\_\_, or a copy thereof is attached.


- ☐ Additional documents in the chain of title are listed on a supplemental sheet.

The undersigned (whose title is supplied below) is authorized to act on behalf of the assignee.

Date: 3/19/2004

Name: ALEX BUGEJA

Title: CTO

Signature: 

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Joint

## ASSIGNMENT

WHEREAS, we, **Kanu Chadha and Manish Bhardwaj**, have invented a certain improvement in **NOVEL RECEIVER ARCHITECTURE FOR PILOT BASED OFDM SYSTEMS** described in an application for Letters Patent of the United States,

- ☐ the specification of which is being executed on even date herewith and is about to be filed in the United States Patent Office;
- ☒ the specification of which was filed on **November 14, 2003** as United States Application No. **10/713,562**;
- ☐ the specification of which is the United States National Stage of International Application No. **[PCT Appl'n No.]**, filed on **[PCT Filing Date]** **[OPTION]** and assigned United States Application No. **[ ]**;
- ☐ which was patented under United States Patent No. **[ ]** on **[ ]**.

WHEREAS, **Engim, Inc.** (hereinafter "ASSIGNEE"), a corporation organized and existing under the laws of the **State of Delaware**, and having a usual place of business at **40 Nagog Park, Acton, Massachusetts 01720** desires to acquire an interest therein in accordance with agreements duly entered into with us;

NOW, THEREFORE, to all whom it may concern be it known that for and in consideration of said agreements and of other good and valuable consideration, the receipt of which is hereby acknowledged, we have sold, assigned and transferred and by these presents do hereby sell, assign and transfer unto said ASSIGNEE, its successors, assigns and legal representatives, the entire right, title and interest in and throughout the United States of America, its territories and all foreign countries, in and to said invention as described in said application, together with the entire right, title and interest in and to said application and such Letters Patent as may issue thereon; said invention, application and Letters Patent to be held and enjoyed by said ASSIGNEE for its own use and behalf and for its successors, assigns and legal representatives, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held by us had this assignment and sale not been made; we hereby convey all rights arising under or pursuant to any and all international agreements, treaties or laws relating to the protection of industrial property by filing any such applications for Letters Patent. We hereby acknowledge that this assignment, being of the entire right, title and interest in and to said invention, carries with it the right in ASSIGNEE to apply for and obtain from competent authorities in all countries of the world any and all Letters Patent by attorneys and agents of ASSIGNEE's selection and the right to procure the grant of all such Letters Patent to ASSIGNEE for its own name as assignee of the entire right, title and interest therein;

AND, we hereby further agree for ourselves and our executors and administrators to execute upon request any other lawful documents and likewise to perform any other lawful acts which may be deemed necessary to secure fully the aforesaid invention to said ASSIGNEE, its successors, assigns and legal representatives, but at its or their expense and charges, including the execution of applications for patents in foreign countries, and the execution of substitution,

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reissue, divisional or continuation applications and preliminary or other statements and the giving of testimony in any interference or other proceeding in which said invention or any application or patent directed thereto may be involved;

AND, we do hereby authorize and request the Commissioner of Patents of the United States to issue such Letters Patent as shall be granted upon said application or applications based thereon to said ASSIGNEE, its successors, assigns, and legal representatives.

IN TESTIMONY WHEREOF, we have hereunto set our hands and affixed our seals the date set forth below.

Inventor's Signature: \_\_\_\_\_

Kanu Chadha

Kanu Chadha

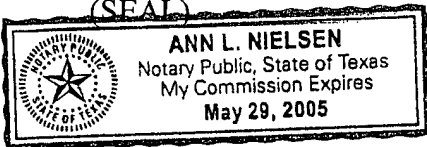
State/Commonwealth

of Texas

County of Fort Bend

Then personally appeared before me the above-named **Kanu Chadha** and acknowledged that he executed the foregoing instrument as his free act and deed this 4th day of March, 2004.

(SEAL)



Ann L. Nielsen

Notary Public

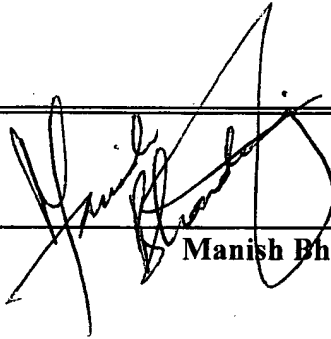
Ann L. Nielsen

(print name)

My Commission expires 05/29/2005

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Inventor's Signature: \_\_\_\_\_



**Manish Bhardwaj**

State/Commonwealth

of MA

County of Middlesex

Then personally appeared before me the above-named **Manish Bhardwaj** and acknowledged that he executed the foregoing instrument as his free act and deed this 19<sup>th</sup> day of February, 20 04.

(SEAL)

Joan M. Farrell Notary Public

Joan M. Farrell (print-name)

My Commission expires 7/24/2004